

CENTER FOR RAPID MICROBE DETECTION

CENTER

Established in 1998, the main goal of this Center is to develop technologies that lead to the real time detection of pathogenic microorganisms.



TECHNOLOGY

In order to detect specific pathogens in real time, novel pathogenic capture platforms and molecules have to be developed. The potential applications of the technology can span a number of industries including pharmaceutical, biotechnology, veterinary and biomedicine, agriculture, food processing, public health, defense, water and sewage treatment. Four technologies, each for a unique use or application, are being developed: ImmunoFlow, ImmunoDNA, GlycoBind and TissueTag. Each technology is volume independent and is expected to perform in both small and large volumes.

ACCOMPLISHMENTS

Prototypes have been developed for ImmunoFlow for two different microorganisms: *Bacillus globigii* spores and *E. coli* O157. The detection time for less than ten cells in tens of liters is 30 minutes. The Center received two patents for reconditioning antibiotic adulterated milk products and for the real time detection of antigens. A patent application has been submitted in the area of pathogen capture molecules and bench top detection with a unique chemical amplification system to increase signal.

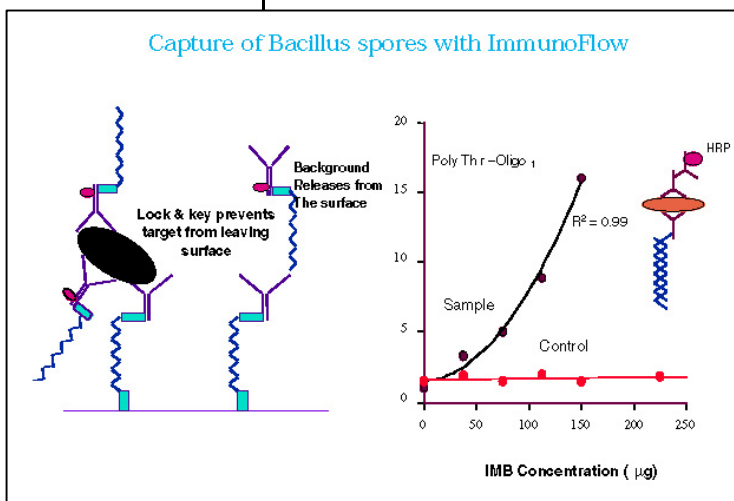
CONTACT

Director: Bart C. Weimer, Ph.D.
Utah State University, Logan, Utah
Phone 435-797-7881, Fax 435-797-0103
milkbugs@cc.usu.edu
mkwalsh@cc.usu.edu
<http://www.usu.edu/~realtime>

Can You I imagine...

... being able to detect less than 10 cells of a specific pathogen strain in tens of liters of a processed liquid food, for example milk, within 30 minutes?

THE CENTER DEVELOPS TECHNOLOGIES FOR THE REAL TIME DETECTION AND QUANTIFICATION OF MICROORGANISMS, ESPECIALLY HARMFUL PATHOGENS.



- Capture of *Bacillus* spores and *E. coli* O157 ImmunoFlow
- Capture DNA with ImmunoDNA
- Capture of *E. coli* O157, *Listeria*, and *Salmonella* with GlycoBind